

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A sensor apparatus adapted to be used with milk extraction machinery, said milk extraction machinery including a plurality of extraction elements which when activated are adapted to deliver extracted milk from two or more extraction elements into at least one collection line, comprising:

~~a sensor apparatus including~~ at least one sensor associated with said at least one collection line, wherein said at least one sensor is adapted to detect the presence of a particular compound within the milk extracted, and

at least one controller adapted to control the activation of said extraction elements,

whereby activation of said extraction elements is controlled to prevent said at least one sensor being exposed to extracted milk supplied from all of said extraction elements at any one time.
2. (Currenty Amended) [[A]] The sensor apparatus as claimed in claim 1 wherein the extraction machinery used with the sensor apparatus is dairy animal milking machinery.

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3. (Currently Amended) ~~[[A]]~~ The sensor apparatus as claimed in ~~claims 1 or 2~~ claim 1 wherein the extracted milk supplied by an extraction element is foremilk.
4. (Currently Amened) ~~[[A]]~~ The sensor apparatus as claimed in ~~any previous~~ claim 1 wherein an extraction element is formed from a single teatcup which includes a pulsator valve associated with a pulsation system.
5. (Currently Amended) ~~[[A]]~~ The sensor apparatus as claimed in claim 4 which includes four extraction element teatcups associated with four independent pulsator lines.
6. (Currently Amended) ~~[[A]]~~ The sensor apparatus as claimed in ~~any previous~~ claim 1 wherein a single collection line collects all milk delivered from a single animal.
7. (Currently Amended) ~~[[A]]~~ The sensor apparatus as claimed in ~~any previous~~ claim 1 which includes at least one sensor integrated into a collection line.
8. (Currently Amended) ~~[[A]]~~ The sensor apparatus as claimed in ~~any previous~~ claim 1 wherein a sensor measures electrical conductivity.

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9. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~any one previous claim~~
1 wherein a controller is formed by a pulsator controller of a dairy animal milking machine.
10. (Currently Amended) [[A]] The sensor apparatus as claimed in claim 9 wherein a pulsator controller sequentially activates the pulsator valves of each teatcup.
11. (Currently Amended) [[A]] The sensor apparatus as claimed in claim 10 wherein a single extraction element only is pulsated at one time.
12. (Currently Amended) [[A]] The sensor apparatus as claimed in claim 10 wherein a pair of extraction elements are pulsated at one time.
13. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~any one previous claim~~
1 wherein a controller allows a drainage delay period between activation of different extraction elements.

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14. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~claims 10 to 13~~ claim 10 wherein the first extraction element or elements activated by a controller are selected randomly.
15. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~claims 9 to 14~~ claim 9 wherein the pulsator valves of non-activated extraction elements are partially activated during extraction of milk from an activated extraction element.
16. (Currently Amended) [[A]] The sensor apparatus as claimed in claim 15 wherein partial activation of an extraction element does not cause milk to be extracted and delivered to at least one collection line.
17. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~any previous~~ claim 1 which includes an indicator adapted to receive an output signal from the sensor, said indicator being adapted to issue an alarm signal indicating abnormal milk has been delivered from an extraction element or elements.
18. (Currently Amended) [[A]] The sensor apparatus as claimed in claim 17 which includes a diversion system associated with the indicator to isolate abnormal milk.

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19. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~claims 17 or 18~~ claim 17 wherein milk abnormality is detected through a comparison of ratios of sensor output signals obtained from milk extracted from an alternative extraction element or elements.
20. (Currently Amended) [[A]] The sensor apparatus as claimed in ~~claims 17 to 19~~ claim 17 wherein a rolling average of sensor readings is employed to detect abnormalities in extracted milk.
21. (Previously Presented) A controller adapted for use with extraction machinery, said extraction machinery including a plurality of extraction elements which when activated are adapted to deliver an extracted milk from two or more extraction elements into at least one collection line, wherein the controller is adapted to control the activation of said extraction elements to prevent milk supplied from all extraction elements entering said at least one collection line at any one time.
22. (Currently Amended) [[A]] The controller as claimed in claim 21, said controller being adapted to activate a pulsator valve associated with each extraction element

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wherein each pulsator valve is associated with a single independent pulsator line.

Claims 23-25 (Cancelled)